



# Jackson Hole Fire/EMS Operations Manual

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Title: **Procedure Guidelines:  
Chest Decompression**

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## **CHEST DECOMPRESSION (Procedure Guidelines)**

### **SCOPE OF PRACTICE**

**All EMT-Intermediates and Paramedics shall operate within their authorized Scope of Practice as limited to those skills and medication approved for use by the Physician Medical Director and Physician Task Force on Pre-Hospital Care as approve and authorized by the Wyoming Board of Medicine**

**Scope of Practice:** EMT-Intermediate, Paramedic

**VOICE ORDER REQUIRED (EMT-Intermediate)**

**NO VOICE ORDER REQUIRED (Paramedic only)**

### **INDICATIONS:**

Chest decompression is indicated for the treatment of tension pneumothorax and/or tension hemopneumothorax. Especially high suspicion should occur with penetrating chest trauma, but may also occur with blunt chest trauma.

### **CONTRAINDICATIONS:**

- Chest decompression is indicated in the field only in the face of a life-threatening tension pneumothorax. In that situation, there are essentially no contraindication since the only alternative is almost certain death

### **COMPLICATIONS:**

- Creation of pneumothorax where none existed
- Laceration of lung tissue
- Bleeding from laceration of intercostal blood vessels
- Severe pain to conscious patient
- Local hematoma
- Infection

### **EQUIPMENT:**

- BSI ( Body Substance Isolation)
- 14 gauge >3 inch over-the-needle catheter

- Flutter valve or one-way valve (if available)

## PROCEDURE:

- Use universal precautions (BSI) and sterile technique
- ABC's
  - Spine precautions if indicated
- High flow oxygen via non-rebreather mask or BVM
- Assess the patient's signs and symptoms to determine if procedure is indicated
- **EMT-Intermediates:** Contact Medical Control and obtain **VOICE ORDERS** for the procedure
- Place patient in supine position
- Expose the patient's chest
- Locate the second intercostal space mid-clavicular line, or the fifth intercostal space mid-axillary line
- Prepare the site with aseptic technique
- Insert the needle either:
  - At the second intercostal space at the mid-clavicular line, directing the needle just over the top of the third rib to avoid the intercostal vessels and nerves (primary site)
- OR -
- At the fifth intercostal space at the mid-axillary line, directing the needle just over the top of the sixth rib to avoid the intercostal vessels and nerves (alternative site)
- After the pleural space is entered, you may feel a "pop" and may hear the tension pneumothorax gas pressure escape. Advance the catheter and remove the needle
- Secure the catheter to prevent removal and attaché one-way valve (if available)
  - Continuous monitoring of the placement must be done
- **The patient will require on-going assessment during treatment and transport. Be prepared to repeat decompression if tension pneumothorax recurs**